

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
ON APPEAL FROM THE EXAMINER TO THE BOARD  
OF PATENT APPEALS AND INTERFERENCES**

In re Application of:	Jonathan Dale
Serial No:	10/608,876
Date Filed:	June 27, 2003
Group Art Unit:	3628
Examiner:	Fadey S. Jabr
Confirmation No.	7466
Title:	DYNAMIC SERVICE SCHEDULING

**Mail Stop Appeal Brief - Patents**  
Commissioner for Patents  
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Dear Sir:

**APPEAL BRIEF**

Appellants have appealed to this Board from the decision of the Examiner, contained in a Final Office Action mailed September 15, 2008 ("*Final Office Action*") and the Advisory Action mailed January 13, 2009 ("*Advisory Action*"), finally rejecting Claims 1-31. Appellants filed a Notice of Appeal on January 15, 2009. Appellants submit this Appeal Brief for consideration of the Board.

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**REAL PARTY IN INTEREST**

The real party in interest for this Application under appeal is Fujitsu Limited, as indicated by an assignment recorded on June 27, 2003 from inventor Jonathan Dale to Fujitsu Limited, in the Assignment Records of the PTO at Reel 014247, Frame 0962 ( 3 pages).

**RELATED APPEALS AND INTERFERENCES**

The Appellants, the undersigned Attorney for Appellants, and the Assignee know of no applications on appeal that may directly affect, be directly affected by, or have any bearing upon the Board's decision in the pending appeal.

**STATUS OF CLAIMS**

Claims 1-31 are pending in this Application and stand rejected pursuant to the *Final Office Action* and the *Panel Decision*. Specifically, Claims 11-20 stand rejected under 35 U.S.C. § 101 according to the Examiner because the claims are directed to computer programs as computer listings *per se*, i.e., the descriptions or expressions of the programs, are not physical “things.” Claims 1-31 stand rejected under U.S.C. § 103(a) as unpatentable over (“*Rose*”) in view of (“*Sobalvarro*”). For the reasons discussed below, Appellants respectfully submit that these rejections are improper and should be reversed by the Board. Accordingly, Appellants present Claims 1-31 for Appeal.

**STATUS OF AMENDMENTS**

All amendments submitted by Appellants have been entered by the Examiner. The claims on appeal appearing in Appendix A of this Appeal Brief represent the form of the claims as of the time of the *Final Office Action* dated September 15, 2008. Appellants filed no amendments to the claims after the *Final Office Action*.

**SUMMARY OF CLAIMED SUBJECT MATTER**

With regard to the independent claims currently under Appeal, Appellants provide the following concise explanation of the subject matter recited in the claim elements. For brevity, Appellants do not necessarily identify every portion of the Specification and drawings relevant to the recited claim elements. Additionally, this explanation should not be used to limit Appellants' claims but instead is intended to assist the Board in considering the Appeal of this Application.

According to particular embodiments of the present invention, there is provided a system and method for dynamic service scheduling. A system 10 includes multiple service providers 12 and a consumer 14 interconnected by a communication network 16. *Specification*, p. 6, ll. 2-11; *id.* at Figure 1. Consumer 14 includes a consumer agent 22 that identifies a template which specifies events for a task. *Id.* The consumer agent 22 implements an iterative process in which the template may be further defined and/or refined to provide links to the services that provide features for fulfilling events within an itinerary. *Id.* at p. 7, l. 19 - p. 9, l. 19; and p. 10, l. 18 - p. 11, l. 4. This process may include determining multiple consumer descriptors, accessing a remote service registry 24 having service descriptors for multiple services, and filtering the services from the service registry 24 based on the service descriptors, the events, and the consumer descriptors. *Id.* at p. 7, ll 19-30; p. 11, l. 13 - p. 12, l. 7; p. 12, l. 31 - p. 13, l. 9. According to particular embodiments, consumer agent 22 interacts with other elements of system 10 to generate a schedule of services 18 that will fulfill particular events according to preferences of consumer 14. *Id.* at p. 6, ll 2-11. For example, consumer agent 22 may interact with multiple service providers 12 to schedule services 18 for a travel itinerary. *Id.*

**A. Claim 1 - Independent**

A method for dynamic service scheduling comprising:

identifying a template specifying a plurality of events;

determining a plurality of consumer descriptors;

accessing a remote service directory having service descriptors for each of a plurality of services;

filtering the services from the service directory based on the service descriptors, the events, and the consumer descriptors to determine potential ones of the services for fulfilling the events;

querying each of the potential services for additional service descriptors;  
filtering the potential services based on the additional service descriptors, the events, and the consumer descriptors to determine selected ones of the services for fulfilling the events;  
identifying service links for accessing the selected services;  
modifying the template to associate the service links with the events;  
determining whether each of the events in the template has an associated service link;  
and  
when each of the events in the template has an associated service link, presenting the template for acceptance.

*See, e.g.*, Figure 1 (10, 12, 14, 16, 18, 20, 22, 24), Figure 3 (18, 52, 54, 56), and Figure 5 (100, 102, 104, 106, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126); and in the specification at 6:1-10:8; 13:25-15:3; 16:9-18:4.

**B. Claim 11 - Independent**

A consumer system comprising:  
a database storing a template specifying a plurality of events and a plurality of consumer descriptors;  
an interface operable to communicate with a remote service directory having service descriptors for each of a plurality of services and to communicate with the services; and  
an agent operable to access the remote service directory, to filter the services from the service directory based on the service descriptors, the events, and the consumer descriptors to determine potential ones of the services for fulfilling the events, to query each of the potential services for additional service descriptors, to filter the potential services based on the additional service descriptors, the events, and the consumer descriptors to determine selected ones of the services for fulfilling the events, to identify service links for accessing the selected services, to modify the template to associate the service links with the events, to determine whether each of the events in the template has an associated service link, and when each of the events in the template has an associated service link, to present the template for acceptance.

*See, e.g.*, Figure 1 (10, 12, 14, 16, 18, 20, 22, 24), Figure 2 (40, 42, 44, 46, 48, 50), Figure 3 (18, 52, 54, 56), Figure 4 (70, 72, 74, 76, 78, 80, 82), and Figure 5 (100, 102, 104,



106, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126); and in the specification at 6:1-10:8; 10:9-13:24; 13:25-15:3; 15:4-16:8; 16:9-18:4

**C. Claim 21 - Independent**

A computer readable medium encoded with instructions for dynamic service scheduling, the instructions operable when executed to perform the steps of:

identifying a template specifying a plurality of events;

determining a plurality of consumer descriptors;

accessing a remote service directory having service descriptors for each of a plurality of services;

filtering the services from the service directory based on the service descriptors, the events, and the consumer descriptors to determine potential ones of the services for fulfilling the events;

querying each of the potential services for additional service descriptors;

filtering the potential services based on the additional service descriptors, the events, and the consumer descriptors to determine selected ones of the services for fulfilling the events;

identifying service links for accessing the selected services;

modifying the template to associate the service links with the events;

determining whether each of the events in the template has an associated service link;

and

when each of the events in the template has an associated service link, presenting the template for acceptance.

*See, e.g.,* Figure 1 (10, 12, 14, 16, 18, 20, 22, 24), Figure 3 (18, 52, 54, 56), and Figure 5 (100, 102, 104, 106, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126); and in the specification at 6:1-10:8; 13:25-15:3; 16:9-18:4.

**D. Claim 31- Independent**

A consumer system comprising:

means for identifying a template specifying a plurality of events;

means for determining a plurality of consumer descriptors;

means for accessing a remote service directory having service descriptors for each of a plurality of services;

means for filtering the services from the service directory based on the service descriptors, the events, and the consumer descriptors to determine potential ones of the services for fulfilling the events;

means for querying each of the potential services for additional service descriptors;

means for filtering the potential services based on the additional service descriptors, the events, and the consumer descriptors to determine selected ones of the services for fulfilling the events;

means for identifying service links for accessing the selected services;

means for modifying the template to associate the service links with the events;

means for determining whether each of the events in the template has an associated service link; and

means for, when each of the events in the template has an associated service link, presenting the template for acceptance.

*See, e.g.,* Figure 1 (10, 12, 14, 16, 18, 20, 22, 24), Figure 3 (18, 52, 54, 56), and Figure 5 (100, 102, 104, 106, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126); and in the specification at 6:1-10:8; 13:25-15:3; 16:9-18:4.

The following discussion identifies the claimed means plus function limitations and, for each such limitation, provides example structures and discussion in the specification for performing the recited functions:

means for identifying a template specifying a plurality of events;

*Example structures for performing the recited function include system 10, service provider 12, consumer 14, network 16, service 18, service agent 20, consumer agent 22, and service registry 24. Specification, p. 6, ll. 2-11; id. at Figure 1.*

means for determining a plurality of consumer descriptors;

*Example structures for performing the recited function include system 10, service provider 12, consumer 14, network 16, service 18, service agent 20, consumer agent 22, service registry 24, agent 40, interface 42, description 44, a knowledge base 46, a plan 48, and a plan processing engine 50.*

means for accessing a remote service directory having service descriptors for each of a plurality of services;

*Example structures for performing the recited function include system 10, service provider 12, consumer 14, network 16, service 18, service agent 20, consumer agent 22, service registry 24, service features 52, a description 54, and feature interfaces 56.*

means for filtering the services from the service directory based on the service descriptors, the events, and the consumer descriptors to determine potential ones of the services for fulfilling the events;

*Example structures for performing the recited function include system 10, service provider 12, consumer 14, network 16, service 18, service agent 20, consumer agent 22, service registry 24, agent 40, interface 42, description 44, a knowledge base 46, a plan 48, a plan processing engine 50, service features 52, a description 54, and feature interfaces 56.*

means for querying each of the potential services for additional service descriptors;

*Example structures for performing the recited function include system 10, service provider 12, consumer 14, network 16, service 18, service agent 20, consumer agent 22, service registry 24, service features 52, a description 54, and feature interfaces 56.*

means for filtering the potential services based on the additional service descriptors, the events, and the consumer descriptors to determine selected ones of the services for fulfilling the events;

*Example structures for performing the recited function include system 10, service provider 12, consumer 14, network 16, service 18, service agent 20, consumer agent 22, service registry 24, agent 40, interface 42, description 44, a knowledge base 46, a plan 48, a plan processing engine 50, service features 52, a description 54, and feature interfaces 56.*

means for identifying service links for accessing the selected services;

*Example structures for performing the recited function include system 10, service provider 12, consumer 14, network 16, service 18, service agent 20, consumer agent 22, service registry 24, agent 40, interface 42, description 44, a knowledge base 46, a plan 48, a plan processing engine 50, service features 52, a description 54, and feature interfaces 56.*

means for modifying the template to associate the service links with the events;

*Example structures for performing the recited function include system 10, service provider 12, consumer 14, network 16, service 18, service agent 20, consumer agent 22, service registry 24, agent 40, interface 42, description 44, a knowledge base 46, a plan 48, a plan processing engine 50, service features 52, a description 54, and feature interfaces 56.*

means for determining whether each of the events in the template has an associated service link; and

*Example structures for performing the recited function include system 10, service provider 12, consumer 14, network 16, service 18, service agent 20, consumer agent 22, service registry 24, agent 40, interface 42, description 44, a knowledge base 46, a plan 48, a plan processing engine 50, service features 52, a description 54, and feature interfaces 56.*

means for, when each of the events in the template has an associated service link, presenting the template for acceptance.

*Example structures for performing the recited function include system 10, service provider 12, consumer 14, network 16, service 18, service agent 20, consumer agent 22, service registry 24, agent 40, interface 42, description 44, a knowledge base 46, a plan 48, a plan processing engine 50, service features 52, a description 54, and feature interfaces 56.*

**GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

Are Claims 11-20 unpatentable under 35 U.S.C. §101 as directed to non-statutory subject matter?

Are Claims 1-31 unpatentable under 35 U.S.C. § 103(a) over *Rose* in view of *Sobalvarro*?

## **ARGUMENT**

### **I. Rejections Under 35 U.S.C. § 101**

The Examiner rejects Claims 11-20 under 35 U.S.C. § 101 as directed to non-statutory subject matter and argues that computer programs are claimed as computer listings *per se*, i.e., the descriptions or expressions of the programs, are not physical “things.” In particular, the Examiner argues that “an *interface* and an *agent* are considered to be software and are therefore deemed to be non-statutory.” *Final Office Action*, p. 3. Appellant notes that Claim 11 is not directed to a process or computer software, but rather is directed to a “consumer system” that includes, at a minimum, a database, an interface, and an agent. The Examiner is improperly applying standards for process claims with respect to this system claim. Also, Appellant notes that the Examiner only addresses the interface and agent elements, while ignoring the fact that this is a “system” claim that also includes a database. Even if some elements of the claim could be implemented using software, that does not render the claim ineligible under § 101, as the claim is directed to a system and contains more than the two elements addressed by the Examiner. Moreover, as detailed in the specification, the interface and agent elements rejected by the Examiner are “incorporated in and/or provided by any suitable network accessible equipment.” Specification, p. 12. The claimed interface and agent are therefore tied to a machine within the meaning of § 101 because they are incorporated in network accessible equipment. For these simple reasons, the Examiner’s rejections under § 101 fail.

### **II. Rejections Under 35 U.S.C. § 103(a)**

The Examiner rejects Claims 1-31 under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent Application Publication No. 2008/0010105 issued to Rose et al. (“Rose”) in view of U.S. Patent Application Publication No. 2006/0287897 issued to Sobalvarro, et al. (“Sobalvarro”). However, *Rose* and *Sobalvarro*, whether taken alone or in combination, fail to teach or suggest all limitations of the claims. Consider Appellant’s independent Claim 1, which recites:

A method for dynamic service scheduling comprising:  
identifying a template specifying a plurality of events;  
determining a plurality of consumer descriptors;  
accessing a remote service directory having service descriptors for  
each of a plurality of services;

filtering the services from the service directory based on the service descriptors, the events, and the consumer descriptors to determine potential ones of the services for fulfilling the events;

querying each of the potential services for additional service descriptors;

filtering the potential services based on the additional service descriptors, the events, and the consumer descriptors to determine selected ones of the services for fulfilling the events;

identifying service links for accessing the selected services;

modifying the template to associate the service links with the events;

determining whether each of the events in the template has an associated service link; and

when each of the events in the template has an associated service link, presenting the template for acceptance.

Among other aspects, *Rose* and *Sobalvarro*, whether taken alone or in combination, fail to teach or suggest: (1) identifying a template specifying a plurality of events; and (2) modifying the template to associate the service links with the events, as Claim 1 requires.

**A. *Rose* and *Sobalvarro* fail to teach or suggest identifying a template specifying a plurality of events.**

Claim 1 requires identifying a template specifying a plurality of events. Appellant's specification describes the claimed template as a tool for scheduling services to fulfill events that is refined over a series of one or more iterations. Specification, p. 8. As teaching the claimed template, the Examiner points to *Rose*'s figures 5A and 6A. *Advisory Action; Final Office Action*, p. 2. *Rose*'s figure 5A teaches a web home page that merely links to a number of other web sites. *Rose*, ¶ 53. *Rose*'s figure 6A teaches a web home page for a restaurant "super-community" that allows an internet user to search restaurants by submitting a search request. *Rose*, ¶¶ 55-56. The Examiner argues that *Rose*'s web home page for restaurants "discloses a template where a user chooses a restaurant and uses the system to book the reservation." *Advisory Action*. Given that Claim 1 requires a template specifying events, and *Rose*'s web page lists restaurants, Appellant assumes that the Examiner points to *Rose*'s restaurants as teaching the claimed events. *Rose*'s restaurants, however, cannot teach "events" as recited by Claim 1, given that the Specification specifically describes restaurants as services, not events. Specification at p. 16, ll. 3-7. Accordingly, *Rose* fails to teach or suggest "identifying a template specifying a plurality of events," as Claim 1 requires. *Sobalvarro* fails to remedy the deficiencies of *Rose*.

Independent Claims 11, 21, and 31 include limitations that, for substantially similar reasons, are not taught by *Rose* and *Sobalvarro*. Because *Rose* and *Sobalvarro* do not teach or suggest every element of independent Claims 1, 11, 21, and 31, Appellant respectfully requests that the Board reverse the Examiner's rejections of Claims 1, 11, 21, and 31, and their respective dependent claims.

**B. *Rose* and *Sobalvarro* fail to teach or suggest modifying the template to associate the service links with the events.**

Claim 1 requires "modifying the template to associate the service links with the events." As teaching these aspects, the Examiner points to static "package offerings" in *Sobalvarro* while arguing that "*Sobalvarro* teaches dynamic packaging of perishable items such as travel goods and services. . . . Further *Sobalvarro* teaches this more descriptive display outlines the various components within the package . . . and may give the consumer the option of adding on optional components." *Office Action*, p. 3. The Examiner's argument, however, ignores the fact that *Sobalvarro*'s package offerings are fixed and cannot be modified. *See Sobalvarro* at Abstract (explaining that its products or services are grouped according to an affinity algorithm and may be "reviewed and approved or selected by human operators using the back end interface before being offered for sale on the sales interface"). Accordingly, *Sobalvarro*'s package offerings fail to teach or suggest modifying anything, much less "modifying the template to associate the service links with the events," as Claim 1 requires. *Rose* fails to remedy the deficiencies of *Sobalvarro*.

Even assuming, for argument's sake, that *Sobalvarro* were to teach modifying its package offerings, the Examiner still does not present a legally sufficient argument demonstrating obviousness. Since the Examiner relies on *Rose*'s web page as teaching the claimed template, *Sobalvarro* would have to teach modifying *Rose*'s web page for the Examiner's rejection to stand; there is no such teaching, and thus the Examiner's argument fails.

Further, the Examiner fails to point to any reason for modifying *Rose*'s web page to include *Sobalvarro*'s package offerings. Not surprising, given that it would be illogical to modify *Rose*'s template to include *Sobalvarro*'s package offerings, as the combination would render *Rose*'s template inoperable. This combination is thus inappropriate. *See* M.P.E.P. § 2143.01 (citing *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)) (If the proposed modification or combination of the prior art would change the principle of operation of the



prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious). The Federal Circuit has also repeatedly warned against using the Appellant's disclosure as a blueprint to reconstruct the claimed invention out of isolated teachings in the prior art. *See, e.g., Grain Processing Corp. v. American Maize-Products*, 840 F.2d 902,907, 5 USPQ2d 1788, 1792 (Fed. Cir. 1988). For at least these reasons, *Rose* and *Sobalvarro*, whether taken alone or in combination, fail to teach or suggest "modifying the template to associate the service links with the events," as Claim 1 recites.

Independent Claims 11, 21, and 31 include limitations that, for substantially similar reasons, are not taught by *Rose* and *Sobalvarro*. Because *Rose* and *Sobalvarro* do not teach or suggest every element of independent Claims 1, 11, 21, and 31, Appellant respectfully requests that the Board reverse the Examiner's rejections of Claims 1, 11, 21, and 31, and their respective dependent claims.

**CONCLUSION**

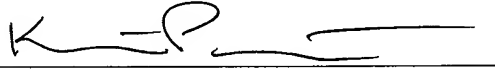
Appellant has demonstrated that the present invention, as claimed in Claims 1-31, is patentably distinct from the cited art. Accordingly, Appellant respectfully requests that the Board reverse the final rejection and instruct the Examiner to issue a Notice of Allowance of Claims 1-31.

The Commissioner is hereby authorized to charge \$510.00 for filing this Appeal Brief to Deposit Account No. 02-0384 of Baker Botts, L.L.P. Appellants believe that no other fees are due; however, the Commissioner is hereby authorized to charge any fees or credit any overpayment to Deposit Account No. 02-0384 of Baker Botts, L.L.P.

Respectfully submitted,

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**Appendix A: Claims Involved In Appeal**

1. A method for dynamic service scheduling comprising:  
identifying a template specifying a plurality of events;  
determining a plurality of consumer descriptors;  
accessing a remote service directory having service descriptors for each of a plurality of services;  
filtering the services from the service directory based on the service descriptors, the events, and the consumer descriptors to determine potential ones of the services for fulfilling the events;  
querying each of the potential services for additional service descriptors;  
filtering the potential services based on the additional service descriptors, the events, and the consumer descriptors to determine selected ones of the services for fulfilling the events;  
identifying service links for accessing the selected services;  
modifying the template to associate the service links with the events;  
determining whether each of the events in the template has an associated service link;  
and  
when each of the events in the template has an associated service link, presenting the template for acceptance.
2. The method of Claim 1, wherein for each of the potential services, the additional service descriptors comprise a plurality of interface descriptors each identifying a feature of the potential service and a format for interfacing with the feature.
3. The method of Claim 2, wherein each of the service links points to a particular feature of the identified service and specifies a command for accessing the particular feature.
4. The method of Claim 1, wherein the consumer descriptors include global descriptors applicable across multiple templates and dynamic descriptors specifying constraints for one or more of the events.

5. The method of Claim 1, further comprising:  
identifying an additional event based on a query to one of the potential services;  
modifying the template to include the additional event;  
accessing the remote service directory;  
filtering the services from the service directory based on the service descriptors, the additional event, and the consumer descriptors to determine potential ones of the services for fulfilling the additional event;  
querying each of the potential services for fulfilling the additional event for additional service descriptors;  
filtering the potential services for fulfilling the additional event based on the additional service descriptors, the additional event, and the consumer descriptors to determine one of the services for fulfilling the additional event;  
identifying a service link for accessing the determined service for fulfilling the additional event; and  
modifying the template to associate the identified service link with the additional event.
6. The method of Claim 1, further comprising receiving an acceptance of the template and, in response, accessing each of the selected services using the service links to request performance of the services.
7. The method of Claim 6, further comprising communicating payment information to at least one of the selected services.
8. The method of Claim 1, wherein the template comprises a text based file.
9. The method of Claim 1, wherein the template specifies events for a travel itinerary that includes an air transportation event, a lodging event, a ground transportation event, and a plurality of activities.

10. The method of Claim 1, wherein the steps of accessing the remote service directory and querying the potential services each involve communications conforming to a publicly defined protocol.

11. A consumer system comprising:  
a database storing a template specifying a plurality of events and a plurality of consumer descriptors;  
an interface operable to communicate with a remote service directory having service descriptors for each of a plurality of services and to communicate with the services; and  
an agent operable to access the remote service directory, to filter the services from the service directory based on the service descriptors, the events, and the consumer descriptors to determine potential ones of the services for fulfilling the events, to query each of the potential services for additional service descriptors, to filter the potential services based on the additional service descriptors, the events, and the consumer descriptors to determine selected ones of the services for fulfilling the events, to identify service links for accessing the selected services, to modify the template to associate the service links with the events, to determine whether each of the events in the template has an associated service link, and when each of the events in the template has an associated service link, to present the template for acceptance.

12. The consumer system of Claim 11, wherein for each of the potential services, the additional service descriptors comprise a plurality of interface descriptors each identifying a feature of the potential service and a format for interfacing with the feature.

13. The consumer system of Claim 12, wherein each of the service links points to a particular feature of the identified service and specifies a command for accessing the particular feature.

14. The consumer system of Claim 11, wherein the consumer descriptors include global descriptors applicable across multiple templates and dynamic descriptors specifying constraints for one or more of the events.

15. The consumer system of Claim 11, wherein the agent is further operable to:  
identify an additional event based on a query to one of the potential services;  
modify the template to include the additional event;  
access the remote service directory;  
filter the services from the service directory based on the service descriptors, the additional event, and the consumer descriptors to determine potential ones of the services for fulfilling the additional event;  
query each of the potential services for fulfilling the additional event for additional service descriptors;  
filter the potential services for fulfilling the additional event based on the additional service descriptors, the additional event, and the consumer descriptors to determine one of the services for fulfilling the additional event;  
identify a service link for accessing the determined service for fulfilling the additional event; and  
modify the template to associate the identified service link with the additional event.

16. The consumer system of Claim 11, wherein the agent is further operable to receive an acceptance of the template and, in response, to access each of the selected services using the service links to request performance of the services.

17. The consumer system of Claim 16, wherein the agent is further operable to communicate payment information to at least one of the selected services.

18. The consumer system of Claim 11, wherein the template comprises a text based file.

19. The consumer system of Claim 11, wherein the template specifies events for a travel itinerary that includes an air transportation event, a lodging event, a ground transportation event, and a plurality of activities.

20. The consumer system of Claim 11, wherein the agent is further operable to access the remote service directory and query the potential services using communications conforming to a publicly defined protocol.

21. A computer readable medium encoded with instructions for dynamic service scheduling, the instructions operable when executed to perform the steps of:

- identifying a template specifying a plurality of events;
- determining a plurality of consumer descriptors;
- accessing a remote service directory having service descriptors for each of a plurality of services;
- filtering the services from the service directory based on the service descriptors, the events, and the consumer descriptors to determine potential ones of the services for fulfilling the events;
- querying each of the potential services for additional service descriptors;
- filtering the potential services based on the additional service descriptors, the events, and the consumer descriptors to determine selected ones of the services for fulfilling the events;
- identifying service links for accessing the selected services;
- modifying the template to associate the service links with the events;
- determining whether each of the events in the template has an associated service link;
- and
- when each of the events in the template has an associated service link, presenting the template for acceptance.

22. The computer readable medium of Claim 21, wherein for each of the potential services, the additional service descriptors comprise a plurality of interface descriptors each identifying a feature of the potential service and a format for interfacing with the feature.

23. The computer readable medium of Claim 22, wherein each of the service links points to a particular feature of the identified service and specifies a command for accessing the particular feature.

24. The computer readable medium of Claim 21, wherein the consumer descriptors include global descriptors applicable across multiple templates and dynamic descriptors specifying constraints for one or more of the events.

25. The computer readable medium of Claim 21, further operable when executed to perform the steps of:

- identifying an additional event based on a query to one of the potential services;

- modifying the template to include the additional event;

- accessing the remote service directory;

- filtering the services from the service directory based on the service descriptors, the additional event, and the consumer descriptors to determine potential ones of the services for fulfilling the additional event;

- querying each of the potential services for fulfilling the additional event for additional service descriptors;

- filtering the potential services for fulfilling the additional event based on the additional service descriptors, the additional event, and the consumer descriptors to determine one of the services for fulfilling the additional event;

- identifying a service link for accessing the determined service for fulfilling the additional event; and

- modifying the template to associate the identified service link with the additional event.

26. The computer readable medium of Claim 21, further operable when executed to perform the steps of receiving an acceptance of the template and, in response, accessing each of the selected services using the service links to request performance of the services.

27. The computer readable medium of Claim 26, further operable when executed to perform the step of communicating payment information to at least one of the selected services.

28. The computer readable medium of Claim 21, wherein the template comprises a text based file.



29. The computer readable medium of Claim 21, wherein the template specifies events for a travel itinerary that includes an air transportation event, a lodging event, a ground transportation event, and a plurality of activities.

30. The computer readable medium of Claim 21, wherein the steps of accessing the remote service directory and querying the potential services each involve communications conforming to a publicly defined protocol.

31. A consumer system comprising:

- means for identifying a template specifying a plurality of events;
- means for determining a plurality of consumer descriptors;
- means for accessing a remote service directory having service descriptors for each of a plurality of services;
- means for filtering the services from the service directory based on the service descriptors, the events, and the consumer descriptors to determine potential ones of the services for fulfilling the events;
- means for querying each of the potential services for additional service descriptors;
- means for filtering the potential services based on the additional service descriptors, the events, and the consumer descriptors to determine selected ones of the services for fulfilling the events;
- means for identifying service links for accessing the selected services;
- means for modifying the template to associate the service links with the events;
- means for determining whether each of the events in the template has an associated service link; and
- means for, when each of the events in the template has an associated service link, presenting the template for acceptance.

**Appendix B: Evidence**

NONE

**Appendix C: Related Proceedings**

NONE